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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/609,377	07/01/2003	Mark Edward Kane	3805-016-27 CIP	1196

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EXAMINER

NGUYEN, CUONG H

ART UNIT	PAPER NUMBER
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3661

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,377

Applicant(s)

KANE ET AL.

Examiner

CUONG H. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/29/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. This Office Action is the answer to the communication received on 1/29/2004 (the IDS).
2. Claims 1-2 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Independent claims 1-16, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (US Pat. 6,148,269), in view of Matsuno et al. (US Pat. 6,219,609), in view of Bidaud (US Pat. 6,347,265), and further in view of Bingeman (US Pat. 6,446,005).

Since claim 8 is the most sophisticated claim containing many limitations of above claims, it is analyzed herein, other listed claims are rejected for the same rationales and cited references because they contain broader limitations or having less limitations covered in claim 8.

A. As for independent claim 8: Kumar et al. suggest a method for determining a size of a wheel on a train comprising the steps of:
- determining a distance traveled by a train during a period of time by, calculating a difference in positions reported by a

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positioning system located on the train at a start of the period and an end of the period;

Kumar et al. do not disclose about adding segments of distance ; however, Bingeman teaches that idea (see Bidaud, claim 6).

Kumar et al. do not expressly disclose that distance repeating the determining step a plurality of times; and adding the linear distance for a total distance;

Kumar et al. do not expressly calculating the wheel size based on the total distance and a total number of wheel revolutions; however Bidaud suggests that idea (see Bidaud, 3:22-32).

Matsuno et al. use GPS technology to obtain accurate positions and wheel speeds of a train via sensors 110a.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Kumar et al., Matsuno et al., Bidaud, and Bingeman to suggest the use of GPS, and linear segments of a traveled distance to calculate a train wheel size because these are available technologies and creating more accuracy to that calculation.

B. As for dependent claims 2,9:

The rationale and references for above rejection of claim 8 are incorporated.

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The examiner respectfully submits that it is clearly obvious with above references a determining step is performed successively with no separation between each period (e.g., a continuously distance).

C. As for dependent claims 3,10:

The rationale and references for above rejection of claim 8 are incorporated.

The examiner respectfully submits that it is clearly obvious with above references a determining step is performed successively with separations between each period (i.e., similar in claim 8's situations).

D. As for dependent claims 5, 12:

The rationale and references for above rejection of claim 8 are incorporated.

The examiner respectfully submits that it is clearly obvious with above references a determining step is performed successively with no separation between each period (e.g., a continuously distance).

E. As for dependent claims 6, 13:

The rationale and references for above rejection of claim 8 are incorporated.

The examiner respectfully submits that it is obvious with above references that a determining step is performed with

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known grades from a track database, in another word, those known elevations/grades would be used in calculations.

F. As for dependent claims 7, 14:

The rationale and references for above rejection of claim 8 are incorporated.

The examiner respectfully submits that it is clearly obvious with above references that a period is one second (sufficiently in a continuous situation).

G. As for dependent claims 7, 14:

The rationale and references for above rejection of claim 8 are incorporated.

The examiner respectfully submits that it is clearly obvious with above references that a determining step is performed in "ordinary situation" without exceeding any threshold.

H. As for dependent claims 17-20:

The rationale and references for above rejection of claim 8 are incorporated.

The examiner respectfully submits that Bidaud uses a tachometer for sensing rotational speed because it is fundamental that "tachometer" is an instrument that indicates the speed, usually in revolutions per minute, at which an engine shaft is rotating. Some tachometers, especially those used in

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automobiles, are similar in construction and operation to automotive speedometers. Other types, often connected directly to the shaft whose speed they indicate, are small electric generators whose output voltage is proportional to speed. This voltage is applied to a voltmeter whose dial is calibrated in speed units. Another type, used only with engines having an ignition system, operates by counting the pulsations of current or voltage in the ignition system, the number of these being proportional to the speed of the shaft.

I. As for dependent claims 22-24:

The rationale and references for above rejection of claim 8 are incorporated.

The examiner respectfully submits that it is clearly obvious with above references to teach addition steps of:

- determining a speed of a train;

determining a parameter of a signal that would be output by a wheel sensor (e.g., taking into account a coefficient factor from rotation sensor - e.g., US Pat. 5,796,613).


- speed of the train is obtained from the positioning system (see also the technique of using Doppler radar for monitoring speed US Pat. 6,373,403).

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CUONG H. NGUYEN whose telephone number is 703-305-4553. The examiner can normally be reached on 7am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THOMAS G. BLACK can be reached on 703-305-8233. The fax phone number for the organization where this application is assigned is 703-305-7687. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cuong Nguyen


CUONG H. NGUYEN
Primary Examiner
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